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EXAMINER
BUTLER, M

ART UNIT	PAPER NUMBER
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This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☑ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made fin

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☑ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice of Draftsman's Patent Drawing Review, PTO-94
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____.

Part II SUMMARY OF ACTION

1. ☑ Claims 1-23 are pending in the applicatio
   Of the above, claims 22-23 are withdrawn from consideration
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☑ Claims 1-21 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☑ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____. has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been receivec ☐ been filed in parent application, serial no. _____ ; filed on _____.
13. ☐ Since this application apppears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

Part III DETAILED ACTION

Election/Restriction

1. Applicant's election of claims 1-21 in Paper No. 5 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (M.P.E.P. § 818.03(a)).

Claim Rejections - 35 USC § 112

2. Claims 1-12 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are replete with vague and indefinite phrases. For example, in claim 1, steps "(C)" and "(D)" mention "the tube" respectively, however it is not clear as to whether "the tube" is referring to said tube before or after applicant's claimed "treatment" in step "(C)". Claim 10's step "(ii)"'s and "(iii)"'s "the tube" is also inclusive in the previous question as to which tube applicant is referring. There is no antecedent basis for claim 2's "the form", "the length", and "the stretching force". Subsequent claims also contain similar antecedent basis errors. Examples of other antecedent basis errors include claim 17's and 18's "the group", and claim 20's "the end". Claim 7 would be more comprehensive if -- the treatment of -- were added in line 1 between "wherein" and "step".

Correction of all antecedent basis errors in all claims is required, not just those specifically listed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by Takamura et al. (4186586). Takamura et al. teach a billet -- equivalent to applicant's "assembly" -- including a metallic tubular sheath -- equivalent to applicant's "metal tube blank" -- and a metallic center core -- equivalent to applicant's "metal core". The billet is mechanically worked as claimed by applicant into "a tube of desired dimensions" upon which the center core is removed. Since at least claim 1 clearly states that the billet's diameter is reduced via plastic deformation (as opposed to removal of material, for example), it is proper to equivocate applicant's core's "stretched condition" to that of Takamura et al.'s plastically deformed billet comprising said metallic tubular sheath and metallic center core.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

6. Claims 1-6 and 11-21 are rejected under 35 U.S.C. § 103 as being unpatentable over Takamura et al. (4186586) in view of Thiruvarudchelvan (4300378). In a case wherein Takamura et al.'s plastic deformation of a metallic center core would fail to coincide/precedent applicant's "stretched core", Takamura et al. teach the method essentially as claimed but would lack a specific teaching of a "stretched condition", specific sample lengths, stretching forces, "inner diameter", martensite temperatures, specific alloys, and cut "discrete lengths" as claimed. However, Thiruvarudchelvan teaches forming elongated articles wherein material is placed within a die cavity and is further placed under tension or compression (claim 1) as the material moves through the cavity while it is also simultaneously rotated. Since Thiruvarudchelvan's tension condition explicitly presumes the stretching of an article, it would have been obvious to one of ordinary skill in the art at the time the invention was made to place the metallic center core, as taught in Takamura et al., under tension and/or rotation, as taught by Thiruvarudchelvan, because doing so would render an improved

method to facilitate a reduction in circular cross-section (and hence shearing stresses) for the removal of one article within another article.

With regards to applicant's specific sample lengths, stretching forces, "inner diameter", martensite temperatures, and specific alloys, all are regarded within the art as obvious matters of design choices to a method of manufacturing lacking any showing of criticality, as claimed, and absent any new or unobvious results since they solve no stated problem (in re Kuhle 188USP7).

With regards to applicant's cut "discrete lengths", the previous would also be obvious to a person of ordinary skill since objects cut into "discrete lengths" would be more manageable for handling. The specific measurements of lengths are also deemed obvious matters of design choices lacking any showing of criticality, as claimed, and absent any new or unobvious results since they solve no stated problem (in re Kuhle 188USP7).

7. Claims 7-10 are rejected under 35 U.S.C. § 103 as being unpatentable over Takamura et al. in view of Thiruvarudchelvan as applied to claims 1-6 and 11-21 above, and further in view of Ohashi et al. (5056209). Ohashi et al. teach preparing a billet comprising a first pipe and a second pipe arranged concentrically with each other, heating the billet, and applying hot extrusion to the billet while maintaining the heating temperatures (claim 1). While a hot extrusion step is used to increase bonding strength, Ohashi et al. teach that heating is used to

consolidate layers which in turn would originally reduce surface stresses (cnfr col. 2, 50-59). It would have been obvious to combine the method of heating the billet assembly previous to subsequent work, as taught by Ohashi et al., with the billet assembly, as taught in the proposed combination of Takamura et al. and Thiruvarudchelvan above, since to do so would provide an expedient process for removing a separate inner core of an assembly.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc W. Butler whose telephone number is (703) 308-1787.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1148.

Facsimile correspondence for this application should be sent to (703) 305-3579.

Marc W. Butler
EXAMINER
ART UNIT 3206

IRENE CUDA
PRIMARY EXAMINER
GROUP 3200

m.w.b.
December 7, 1995